same was true when efforts were made to control it. The muscles especially involved were the diaphragm, trapezii, the sternocleidomastoid, the pectorals, the latissimus dorsi, the triceps, the rectus abdominis and the sartorius. The muscle spasm was asynchronous and asymmetrical on the two sides of the body, and was outside the control of the will. Occasionally, the muscles about the angle of the mouth and eye participated in the spasm. The myoclonic movements occurred twenty to thirty times a minute. There were no hysterical stigmata.

Dr. Pearce Bailey said he had expected to show a case of paramyoclonus of the Friedreich type, but the patient was unable to be present. It was the case of a young man, twenty-one years old, who was thrown out of a wagon, sustaining a fracture of one collar bone and of three ribs on the opposite side. As a result of this injury, he developed a traumatic pneumonia and pericarditis, and about six months later, paramyoclonus was first observed. The muscular movements were of two kinds: One, a general fibrillation involving the masseters, the muscles of the upper extremity, the trunk and thigh; the other variety was a contraction of individual bundles of muscles. There was also an increased peripheral reflex excitability. The movements were entirely inco-ordinate, and the picture presented was that of typical paramyoclonus, as described by Friedreich, and apparently the result of the thoracic inflammation which in turn was the direct result of the injury.

In the case shown to the Society, Dr. Bailey said, the picture presented was an entirely different one and was presented as a distinct clinical contrast. The movements, which had followed an attack of grippe some weeks ago, were confined to the muscles of the chest and diaphragm, and from their co-ordinate and distinctly associated character he was inclined to look upon the case as one of multiple tic rather than of paramyoclonus. An interesting feature of this case was that one sister had been similarly affected.

Dr. F. X. Dercum, in discussing Dr. Clark's case, said he certainly did not regard it as a typical one of paramyoclonus, and as Dr. Bailey had suggested, it seemed more closely allied to the multiple tics.

Dr. Wharton Sinkler coincided with Dr. Dercum that the case resembled one of habit spasm or convulsive tic more than one of myoclonus multiplex.

Dr. Alfred Gordon thought the case represented a mixed form of muscular twitchings, and that the picture did not agree entirely with that of paramyoclonus. The patient presented contractions not only of the myoclonic type, but also of electric chorea of the Bergeron-Henoch type; also those of myokymia of Kny-Schultze's type.

## TUMOR IN THE ANTERIOR PORTION OF THE BRAIN STIMULATING GROWTH IN THE POSTERIOR FOSSA.

By Dr. William Leszynsky.

The patient was a girl, 19 years old; single; a native of Russia, and a cigarette-roller by occupation, who was admitted to the Lebanon Hospital on April 16, 1906.

She stated that she had enjoyed good health until about six months ago, when she fell down stairs, striking her head in the right occipital region. She remained unconscious about five minutes. Severe frontal headache soon followed, and persisted, with acute exacerbations, for several months. The headache then extended to both parietal regions, and there was occasional vomiting. Subsequently, she had severe vertigo lasting three days. Vision then began to fail, and at the end of two weeks she was blind.

Six months after the injury she was admitted to the hospital in the following condition. Examination showed a well-nourished, healthy-looking girl, weighing 130 pounds. The pupils were equal, slightly dilated, reacting slowly to light and in attempts at convergence; paresis of the left externus; vision of both eyes equal shadows at eight inches; bilateral choked disks of four diopters; no retinal hemorrhages. Slight asymmetry of the muscles of expression, with weakness on the right side; tongue protruded well, slightly tremulous and coated; speech normal; slight rigidity of the post-cervical muscles, accompanied by pain on movement of the head. Pain and tenderness on pressure and percussion over the temporal and suboccipital regions on both sides. No enlarged lymphatics. The watch was heard at eighteen inches on the left side, and at six inches on the right. Tests for smell and taste proved unreliable. The grasp was equal on both sides, but there was slight weakness of the flexors and extensors in the left upper extremity; also uncertainty in volitional movements of both hands in the finger-to-nose test, but no distinct ataxia nor loss of muscular sense. In either hand she could recognize a pocket-knife and a half-dollar coin, but she could not correctly distinguish smaller coins or keys. There was some uncertainty and unsteadiness in gait, but no titubation. No static ataxia. In both lower extremities the muscular power and resistance were preserved, but there was occasional extensor rigidity on the left side when the limb was manipulated. Both knee jerks were weak and obtained only with re-enforcement. There was spurious ankle clonus on both sides; plantar reflex was feeble, but of normal type. No objective sensory disturbances. Thoracic and abdominal organs presented no evidences of disease. Urine normal; blood, hemaglobin, 80 to 90 per cent.; 9,200 white blood cells. There was no history of syphilis.

The patient soon became totally blind, and during the following month she frequently complained of frontal headache and sharp, shooting pains beginning in the sub-occipital region and radiating through both upper extremities to the finger-tips. The knee jerks became more active, the partial astereognosis had disappeared, and the hearing became normal. Subsequently, there were frequent attacks of intense occipital headache and vomiting, with cervical rigidity and retraction of the head, and pain radiating through the arms. Tenderness and pain on pressure over the suboccipital region persisted; paresis of both external recti muscles and spontaneous horizontal nystagmus developed; the jaw jerk was well marked. Both hands and feet were cold and cyanotic; there was rigidity of the flexors and pronators in both upper extremities, more pronounced on the right side, with slightly exaggerated elbow jerks and increased mechanical and faradic irritability of muscles. Muscular power was unimpaired, and her gait and station remained normal. Passive movement of the lower extremities produced extensor and adductor rigidity. Kernig's sign was present on both sides, and paresis of the right posterior thigh group was observed. The knee jerks were equally exaggerated; right ankle clonus well marked; spurious clonus and increased Achilles reflex on the left side, and normal plantar reflex.

In August, 1906, the patient's condition was practically unchanged, although the symptoms varied in degree from time to time. The optic neuritis receded, and atrophy developed. The cerebrospinal fluid was found normal, and the withdrawal of 30 c.c. was followed by intensified headache lasting several hours. The patient's condition became gradually worse. The diagnosis was made of brain tumor, probably located in the posterior fossa.

Operation: Bilateral occipital craniectomy was performed, and four days later the dura was opened and the posterior fossa explored, but no tumor formation was discovered. Death from exhaustion occurred on the eighth day, without any indications of infection.

Autopsy: For obvious reasons, the brain was removed through the surgical opening. A glioma about two centimeters in diameter was found in the median line in the anterior portion of the brain, originating in the cerebral substance in front of the anterior horns of the lateral ventricles, and extending posteriorly to the anterior pillars of the fornix, destroying the septum pellucidum and pressing upon the foramen of Munro. It was attached laterally to the caudate nuclei, and inferiorly just in front of the optic chiasm. The lateral ventricles were much distended with serous fluid. There was no growth in the posterior fossa.

In conclusion, Dr. Leszynsky, after discussing the indications and symptoms which led to the diagnosis of a tumor probably located in the posterior fossa, with pressure upon or involvement of the upper cervical nerves, said that in view of the autopsy findings, in all probability the pains in the arms were due to the forcing downward of the cerebellum and medulla into the foramen magnum as a result of prolonged intracranial pressure, as had recently been described by Collier.

Dr. Charles K. Mills said that some years ago he had a patient operated on by Dr. Frazier for a tumor which was supposed to be located in the prefrontal region. No tumor was revealed by the operation, but after death one was found in the cerebellar pontile angle. This patient was not seen until a very late stage of the disease, after terminal conditions had clouded the true diagnosis.

In speaking of the paralysis that occurred in the case reported by Dr. Leszynsky, Dr. Mills said that the explanation offered for this condition by Collier was probably the correct one.

Dr. William G. Spiller said the statement made by Dr. Leszynsky that the posterior horns of the lateral ventricles were very much dilated perhaps offered another explanation for the cerebellar symptoms. With such dilatation there was pressure upon the cerebellum. Dr. Spiller had reported a case in which the symptoms of cerebellar tumor had been caused by dilatation of the posterior horns of the lateral ventricles.

He was much in doubt as to the significance of pain in the upper limbs in cases of brain tumor. He could recall two such cases. In one of them, which came to autopsy, the tumor extended down on the cord several segments. In the other case, the patient was still alive.

Dr. Dercum, in discussing Dr. Leszynsky's case, referred to a case of supposed cerebral tumor in which operation was performed and nothing was found. At the autopsy, a large tumor was found in the cerebellum.

## A CASE OF LANDOUZY-DEJERINE FORM OF MYOPATHY.

By Dr. Charles E. Atwood.

The patient was a boy, five years old, who came under observation in February, 1907. The family history was as follows: The boy's father, a salesman, had rheumatism; one paternal aunt was insane; the maternal grandmother had asthma. The patient was the second birth; the first was a miscarriage, and the third a bright and healthy girl. None of the child's relatives, so far as could be ascertained, suffered from dystrophy. The birth was reported to have been a shoulder presentation. In infancy, he was unable to suckle properly from the beginning, although he had swallowing movements, and nourishment was supplied to him from a bottle in the nipple of which a large hole was cut so that the milk could flow more readily. He had had whooping cough, chicken-pox, summer complaint and tonsillitis; he also had adenoids and was tongue-tied, and operations were performed on the tongue and to remove the tonsils and adenoids.

Dr. Atwood said the nature of the child's disease gave it an appearance of mental deficiency, which was, however, probably apparent only. He was very timid, and it had been rather difficult to examine him. There seemed to be no disturbance of the special senses or of general sensibility, excepting that hearing was somewhat diminished. All the cranial nerves were intact. The muscles of the eyeball were somewhat affected (exophoria, etc.), but not those of mastication or deglutition, nor the laryngeal muscles. The boy began to walk at the age of fourteen months and made the ordinary movements of all the limbs, but the mother had never noticed any movements of the facial muscles excepting lately. There was very little involvement of the tongue. He could make the associated lip movements sufficient to permit "troughing" of the tongue. There was no fibrillation to be found anywhere; also no pain; no vasomotor disturbance; no skin or bone trophic disorder; the sphincters were normal. The mechanical irritability in the affected muscles was less than normal, and their faradic and galvanic excitability, as far as they could be tested, seemed to be diminished,. but there appeared to be no R.D. The knee jerks were absent.

The chief facial muscles affected were the zygomatics, as shown by the loss of the labiofacial fold; the risorii, levator menti and orbicularis oris, the patient being unable to whistle, to change expression, as in crying, or to articulate clearly labials and linguals; the buccinators were unable to draw back the corners of the mouth in smiling; the orbicularis palpebrarum closed the eyes incompletely, and the corrugator supercilii and the occipito-frontalis were inactive. There was no movement to puff out the cheeks, but there was some ability to compress them. The appearance of the face was somewhat analogous to that observed in myasthenia, but the muscles in which there was some activity did not become quickly exhausted. Wasting in the facial muscles was not at present demonstrable. The supra and infraspinati on each side were noticeably atrophied, and there appeared to be a slight weakness of the right sterno-cleido-mastoid and omohyoid, and